Educational Goals and Objectives for Endocrinology & Metabolism

Location: Tufts-New England Medical Center
Lahey Clinic
Lemuel Shattuck Hospital/Faulkner Hospital
Type of Rotation: Elective
Length of Rotation: 4 weeks

Overview

During the Endocrinology and Metabolism rotation, the TY Resident will be exposed to a variety of conditions listed below:

I. Diabetes Mellitus

A. Pathophysiology of type I and type II diabetes
B. Management of acute complications
1. Diabetic ketoacidosis
2. Hyperosmolar diabetic states
3. Hypoglycemia
4. Use of intravenous insulin infusion
C. Recognition of chronic complications
1. Retinopathy by fundoscopic exam
2. Nephropathy
3. Neuropathic syndromes
D. Therapy
1. Initiation and adjustment of insulin
2. Proper use of oral hypoglycemic agents
3. Interpretation of home glucose monitoring and glycohemoglobin determinations

II. Thyroid

A. Hyperthyrodism
1. Basic signs and symptoms
2. Major etiologies
3. Diagnostic testing: hormone levels and nuclear scans
4. Treatment options: antithyroid drugs, radioactive iodine, surgery
B. Hypothyroidism
1. Diagnosis: exam and laboratory
2. Therapy with thyroid hormone
C. Thyroid nodules
1. Exam to detect goiter and nodules
2. Appropriate use of isotope scans
3. Indications for needle aspiration

III. Adrenal

A. Recognition of signs and symptoms of adrenal excess or deficiency
1. Cushing's: causes (pitiutary, ectopic, and adrenal)

2. Addison's: acute therapy, chronic replacement
3. Treatment of patient with suppressed pituitary axis under stress conditions
4. Approach to the incidental adrenal nodule

IV. Gonadal

A. Differential diagnosis of:
1. Amenorrhea
2. Galactorrhea
3. Hirsutism
4. Erectile impotence

B. Assessment and treatment of menopause

V. Calcium and Bone Metabolism

A. Hypercalcemia
1. Differential diagnosis special attention
a. Primary hyperparathyroidism
b. Hypercalcemia of malignancy
2. Treatment of acute hypercalcemia

B. Osteoporosis
1. evaluation of secondary causes
2. Therapy to include calcium and estrogens

C. Paget's disease
1. Recognition by abnormal lab and radiology

VI. Lipid Metabolism

A. Pathophysiology of lipid pathways
B. Detection of high risk cholesterol patterns and indications for treatment
C. Dietary guidelines
D. Pharmacologic agents, mechanisms and use

VII. Pituitary

A. Hyperfunction
1. Hyperprolactinemia
2. Cushing's disease
3. Acromegaly
4. Syndrome of inappropriate antidiuretic hormone (ADH)

B. Hypofunction
1. Panhypopituitarism
2. Diabetes insipidus

Principle Educational Goals Based on the ACGME General Competencies

In the tables below, the principle educational goals of the Endocrinology and Metabolism curriculum are listed for each of the six ACGME competencies:

1) Patient Care
2) Medical Knowledge
3) Practice-Based Learning and Improvement
4) Interpersonal and Communication Skills
5) Professionalism
6) Systems-Based Practice

The abbreviations for the type of learning environment and evaluation method are defined below.

Learning Environments:
- SDPC Supervised direct patient care
- DL Didactic lectures
- AR Assigned readings, including national Specialty published guidelines
- RP Resident presentations

Evaluation Methods:
- ME Monthly evaluation
- CP Case presentations to attending
- MCX Mini-Cex

1) Patient Care

Objective	Learning Environments	Evaluation Methods
Perform a endocrinologic history, physical examination and assessment	SDPC, RP	ME, MCX, CP
Formulate a management plan	SDPC, RP	ME, CP
Clearly document patient management in the medical record	SDPC, RP	ME, CP

2) Medical Knowledge

Objective	Learning Environments	Evaluation Methods
Recognize endocrine symptoms, signs of variety conditions	SDPC, AR, DL	ME, MCX
Formulate differential diagnosis for common endocrine diseases	SDPC, DL, AR	ME, CP, MCX
Management of common endocrine syndromes	SDPC, RP	ME, CP
Use medications Appropriately	SDPC, AR, DL	ME

3) Practice-based Learning and Improvement

Objective	Learning Environments	Evaluation Methods
Identify deficiencies in knowledge base and develop independent means to address them	SDPC, AR	ME
Be able to perform a literature search to answer clinical questions	AR	ME
Facilitate the learning of other health care team members	SDPC	ME, CP

4) Interpersonal and Communications Skill

Objective	Learning Environments	Evaluation Methods
Communicate effectively and compassionately with patients	SDPC	ME
Effectively communicate patient's needs to other providers	SDPC	ME, CP
Facilitate the functioning of the multidisciplinary team	SDPC	ME

5) Professionalism

Objective	Learning Environments	Evaluation Methods
Work to insure elder safety, dignity, comfort, independence and quality of life	SDPC	ME, MCX
Treat all patients, colleagues and hospital/facility staff with respect and equality	SDPC	ME
Maintain patient confidentiality and HIPAA guidelines	SDPC, AR, DL	ME

6) Systems-based Practice

Objective	Learning Environments	Evaluation Methods
Understand and participate in use of guidelines of care for endocrine conditions health care delivery	SDPC, AR, DL	ME, CP
Work as an equal member of a multidisciplinary team	SDPC	ME
Understand appropriate referrals for diabetes dietitian, educator, podiatry, ophthalmology and medical subspecialties	SPDC	ME

Endocrinology Curriculum Checklist

Adrenal disorders
Hypercortisolism
Adrenal insufficiency
Bone disorders
Osteopenia/osteoporosis
Paget's disease
Diabetes mellitus
Type I
Type II
Metabolic disorders
Hyperosmolar state
Hypoglycemia
Hyponatremia
Hypernatremia
Lipid disorders
Obesity
Panhypopituitarism
Parathyroid disorders
Hypercalcemia
Hypocalcemia
Hyperparathyroidism
Reproductive/sexual disorders
Change in sexual function
Menopause
Menstrual disorders
Galactorrhea
Hirsutism/virilization
Hypogonadism,male
Thyroid disorders
Goiter
Nodule
Hyperthyroidism
Hypothyroidism